CHO-CXCR7 متوسط إلى مرتفع

305412MH

معلومات عامة

الوصف

Disclaimer: The prices displayed for cell lines are exclusively for academic/not-for-profit customers. For commercial entitites the price is approximately €6,250.
If you represent a commercial entity or are unsure which category applies, please
contact us.
The CHO-CXCR7-Medium-high cell line is a stable recombinant CHO (Chinese Hamster Ovary) cell line engineered to express the CXCR7 receptor at a medium-high level. This cell line was created using an innovative landing pad technology, which allows for targeted integration of the CXCR7 gene at a pre-validated genomic locus, ensuring consistent and reproducible expression. CXCR7, also known as ACKR3, is an atypical chemokine receptor involved in immune modulation and cancer biology. Unlike typical GPCRs, CXCR7 does not signal through G proteins but instead scavenges chemokines such as CXCL12 and CXCL11, and forms heterodimers with CXCR4, influencing processes like tumor progression, metastasis, and angiogenesis.
CXCR7 is notably overexpressed in various cancers, including breast, lung, and prostate cancers, where it is linked to increased tumor growth, metastasis, and poorer prognosis. This makes the CHO-CXCR7-Medium-high cell line particularly valuable for oncology research, allowing for the study of CXCR7's role in cancer progression and its potential as a therapeutic target. The expression of CXCR7 in this cell line was confirmed using flow cytometry.

الأنسجة	Ovary
المرض	Chinese hamster ovary, non-neoplastic; genetically engineered for CXCR7 (ACKR3) surface expression (medium-high expression level)

التطبيقات

Antibody screening; CXCR7-targeted therapy development; chemokine receptor biology; tumor microenvironment research; flow cytometry

المرادفات

- CHO-CXCR7

التصنيف

كائن حي	الهامستر الصيني
الجنس	أنثى
خصائص النمو	التثبيت والتعليق
حالة الكائنات المعدلة وراثيًا	GMO-S1

تفاصيل حالة الكائنات المعدلة وراثيًا

GMO-S1: This CHO cell line contains a construct supporting medium-to-high expression of human CXCR7 for chemokine receptor research. This classification applies only within Germany and may differ elsewhere.

مستوى السلامة البيولوجية	1

الخصائص

المورفولوجيا	Epithelial-like
نوع الخلية	Epithelial cells
زمن المضاعفة	approx. 14-16 hours

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المعرّفات

المرجع

CHO-CXCR7 Medium-high (Cytion catalog number 305412MH)

رقم التعريف الضريبي لدى NCBI	10029
سيلوصور	CVCL_A8W2

التعبير والقابلية للإصابة

المستقبلات المُعبَّر عنها

CXCR7 (ACKR3)

التعامل مع النباتات وزراعتها

وسط الاستزراع

For adherent cultures: DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
For suspension cultures: CHO Growth Medium A (from InSCREENeX; InSCREENeX catalog number INS-ME-1039)

بيئة الحضانة	37°C, 5% CO_2, humidified atmosphere.

المكملات الغذائية

For adherent cultures: Supplement the medium with 5% FBS. Add Geneticin (G418-Sulfat) to achieve a final concentration of 0.5 mg/mL.

كاشف التفكك	For adherent cultures: Trypsin-EDTA

إعادة الاستنبات

For routine adherent cell culture: Aspirate the old culture medium from the adherent cells, and wash them with PBS to remove any remaining medium. After aspirating the PBS, add the appropriate volume of Trypsin/EDTA solution based on the culture vessel size (e.g., 1 ml for a T25 flask, 3 ml for a T75 flask) and incubate at room temperature or 37°C for 5-10 minutes, or until the cells detach. Monitor detachment under a microscope, and gently tap the vessel if necessary to release the cells. Once detached, add complete medium to inactivate the Trypsin/EDTA, gently resuspend the cells, and transfer an aliquot of the cell suspension into a new culture vessel containing fresh medium. Place the vessel in an incubator set to 37°C with 5% CO_2, and change the medium every 2-3 days.

نسبة التقسيم	1 to 5
كثافة البذر	2 to 5 x 10^4 cells/cm^2
تجديد السوائل	2 to 3 times per week
التعافي بعد ذوبان الجليد	After thawing, split the cells at a ratio of 1:2 to 1:3 in T25 flasks and allow the cells to recover from the freezing process and to adhere (for adherent cultures) for at least 24 hours.

إذابة الثلج والزراعة

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

مراقبة الجودة والحفظ بالتبريد

العقم

Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.
To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.

وسط التجميد	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

شروط التخزين

For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

شروط الشحن

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

المانح

عمر المتبرع	Adult

الشؤون القانونية والسلامة

احتياطات السلامة

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

إخلاء المسؤولية

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

الضمان

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

تسري اتفاقيات الأطراف الثالثة	Yes